UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,664	10/03/2000	Thomas M. Stormann	072827-1801	7662

7590 12/31/2003

Richard J. Warburg
FOLEY & LARDNER
23rd Floor
402 West Broadway
San Diego, CA 92101-3542

EXAMINER	
LANDSMAN, ROBERT S	

ART UNIT	PAPER NUMBER
1647	

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/679,664	STORMAN ET AL.	
	Examiner	Art Unit	
	Robert Landsman	1647	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 August 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) The period for reply expires *6* months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1.☒ A Notice of Appeal was filed on *28 August 2003*. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2.☐ The proposed amendment(s) will not be entered because:

(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

(b) ☐ they raise the issue of new matter (see Note below);

(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3.☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.

4.☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5.☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See Continuation Sheet*.

6.☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7.☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: *1-11 and 43-62*.

Claim(s) withdrawn from consideration: _____.

8.☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9.☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10.☐ Other: _____

Continuation of 3. Applicant's reply has overcome the following rejection(s): the rejection of claim 45 under 35 USC 112, second paragraph, regarding "MRluR.".

Continuation of 5. does NOT place the application in condition for allowance because: claims 1-11 and 42-46 remain rejected and new claims 47-62 are also rejected under 35 USC 112, first paragraph, for the reasons already of record on pages 2-3 of the Office Action dated 2/26/03. Applicants argue that one of ordinaly skill in the art recognizes that many residues in active proteins can be altered without destroying activity, and a variety of standard molecular biology techniques are available to produce nucleic acid sequences encoding such modified proteins. In addition, Applicant argues that information has been provided on how to determine where modifications can be made to the respective receptor domains in the present invention. Thus, in addition to the specific fusion receptor constructs described in the specification, Applicant has also described how to conveniently identify residues that likely can be altered or deleted without destroying activity. Applicant describes how to use alignment of different receptors and of receptors from different sources for identifiçation of conserved and variable residues to identify portions of the receptor sequences that can likely be varied without destroying activity. Further, Applicant points out the well-known conservative substitutions of similar amino acid residues, and on page 18 indicates that the encoding nucleic acid sequences can utilize degenerate condons. Thus, Applicant has provided guidance so that one of ordinary skill in the art can produce many sequence variants without undue experimentation. These arguments have been considered, but are not deemed persuasive. As previously stated by the Examiner, the claims recite "substantially similar" and "at least 10 amino acids" a well as "90% sequence identity" and 75% sequence identity." Again, the domain in question comprise anywhere from 200 to 600 residues The present claims do not limit the alterations to a couple of conservative substitutions, but the changes encompassed by the claims can literally be hundreds of amino acid residues and Applicant has not demonstrated that potentially hundreds of residues of a receptor domain can be altered without affecting receptor function.

Claims 1-11 and 42-46 remain rejected and new claims 47-62 are also rejected under 35 USC 103 for the reasons already of record on pages 5-6 of the Office Action dated 2/26/03. Applicants argue that there would be no motivation to combine the cited references. The motivation is seen when all of these references are taken together. Call/mGluR fusion (chimeric) receptors were know'n and were known to be functional at the time of the present invention (Fuller et al.). Promiscuous G proteins were also known (Negulescu et al.). These promiscuous G proteins were known to couple to a wide variety of GPCRS, and it would be expected that they would be able to couple to fusion proteins of GPCRS. Therefore, due to the ability of promiscuous G proteins to couple to a wide variety of GPCRs the artisan would have been motivated to use these proteins to determine the functionality of a fusion protein, since these G proteins would allow for the maximum flexibility of the system and the best chance to identify functional fusion proteins. Given the teachings of Bertin et al. that it is desirable to link the G protein to the GPCR, the artisan would have been motivated to perform this procedure for the present invention to optimize the conditions in order to produce the best chance of identifying these functional fusion proteins.

Gary L. Kunz

GARY KUNZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600